



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,886	04/09/2004	Paul K. Zoratti	10541-1316	2485
40879	7590	09/20/2005	EXAMINER	
AUTOLIV ASP 3350 AIRPORT ROAD OGDEN, UT 84405			PREVIL, DANIEL	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/070,886

**Applicant(s)**

ZORATTI ET AL.

**Examiner**

Daniel Previl

**Art Unit**

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 21-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 11-18 and 21-23 is/are allowed.  
6) ☒ Claim(s) 1-3 and 8-10 is/are rejected.  
7) ☒ Claim(s) 4-7 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/13/2002.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 8, 10, are rejected under 35 U.S.C. 102(b) as being anticipated by Clark, Marcus T. (EP 0 775 613).

Regarding claim 1, Clark discloses a vehicle impact sensor assembly having a longitudinal axis, and first and second ends for monitoring impact events in a vehicle (fig. 1; page 3, lines 57-58, page 3, lines 1-31) comprising: a first housing member 24 (fig. 3); a second housing member cooperating with first housing member to define an elongated channel 26 (fig. 3; page 3, lines 16-52); an elongated impact sensor element for providing signals of impact events upon deformation of impact sensor, impact sensor element disposed within channel (fig. 3, page 4, lines 10-50); a connector for electrically connecting impact sensor element to vehicle (page 3, page 3, lines 21-27); whereby first and second housing members closeably interact to encase impact sensor element (fig. 3).

Regarding claim 2, Clark discloses electronics (accelerometers) to process signals from impact sensor element (page 2, lines 50-58).

Regarding claim 3, Clark discloses a layer of compressible material disposed within elongated channel and under elongated impact sensor element (fig. 1).

Regarding claim 8, Clark discloses an impact sensor element is a bend sensitive element and is selected from the group consisting of piezoelectric cables, fiber optic deformation sensors and resistance elements (page 2, lines 41-51).

Regarding claim 10, Clark discloses a connector is integrally formed on lower housing member (fig. 3).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark Marcus (EP 0 775 613) in view of Behr (US 5,141,193).

Regarding claim 9, Clark discloses all the limitations in claim 1 but fails to explicitly disclose a pigtail connector.

However, Behr discloses a pigtail connector (col. 2, lines 20-23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Behr's pigtail connector in Clark

to secure efficiently the impact sensor in the vehicle thereby enhancing the safety of the vehicles as taught by Behr (col. 1, lines 9-27).

***Allowable Subject Matter***

Claims 4-7, are objected.

5. Claims 11-18, 21-23 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: In combination with all the limitations in the claim, the prior arts fail to teach or make obvious: a first housing member defining a plurality of localized projections disposed adjacent impact sensor element, whereby sufficient impact exerted upon first housing member causes projections to engage impact sensor element and induce localized deformation, providing an impact sensor assembly having an elongated longitudinal axis and first and second ends, a cross-sectional shape, an electrical connector and defining a plate disposed in a perpendicular manner to longitudinal axis at first end of assembly and having at least through passageway, sliding impact sensor assembly along longitudinal axis into main opening of mounting member until plate prohibits further inward sliding.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2636

Kruse et al. (US 5,623,246) discloses a vehicle impact sensor arrangement for detecting a side impact.

Senyk et al. (US 6,204,756) discloses a diagnostic for vehicle deformation sensor system.

Kato (US 5,793,005) discloses collision detecting apparatus operable in response to deformation and acceleration.

Saab (US 3,917,020) discloses vehicle safety system.

Meyer et al. (US 5,419,407) discloses a triggering mechanism for a safety device in a vehicle, particularly for a side airbag.

Sakakida et al. (US 5,195,776) discloses an air bag installation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is (571) 272-2971. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Previl  
Examiner  
Art Unit 2636

DP  
September 6, 2005.



JEFFERY HOFSAAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600